

IN THE CLAIMS:

1 .(currently amended) A process to enable the control of photolithographic feature size on structures having one or more severe non-flat topologies defining regions of concern for the purpose of performing successful photolithography thereon using photolithographic equipment defining a wavelength source, a numeric aperture, photoresist, and conformal deposition or depositions, the process comprising the steps of:

first determining a depth of focus from at least the wavelength of the source and the numeric aperture of the photolithographic equipment;

second determining a thickness of the photoresist being used;

third determining characteristics of the conformal ~~deposition~~ depositions being used;

evaluating ~~from~~ the above first, second, and third determinations,

determining from the evaluating one or more acceptable layout dimensions of the one or more severe non-flat topology regions of concern for satisfactory photolithographic processing wherein the regions of concern in the acceptable layout dimensions would be filled by depositions;

rearranging the layout dimensions of the present structures such that ~~forming a severe non-flat topology wherein the layout dimensions are changed, if necessary, to~~ comply with the one or more ~~acceptabe~~ acceptable layout dimensions.

- 1 2.(previously presented) The process as claimed in **Claim 1** wherein the step of
2 evaluating said one or more layout dimensions of the one or more severe non-flat topolo-
3 gies includes comparing of the depth-of-focus of the particular photolithographic equip-

4 ment and the thickness of a photoresist film applied to the surface of the structure against
5 the severity of the non-flat topologies.

1 3. (currently amended)The process as claimed in **Claim 1** wherein a the structure having
2 a severe non-flat topology is a semiconductor structure and the step of forming the one or
3 more severe non-flat topologies includes etching the semiconductor structure.

1 4. (currently amended)The process as claimed in **Claim 1** ~~wherein the step of forming a~~
2 ~~severe non-flat topologies includes~~ further including the step of applying a conformal
3 layer of material ~~on a structure having a severe non-flat topology including over the area~~
4 ~~of the formed one or more severe non-flat topologies~~ onto the regions of concern..

1 5. (previosuly presented)The process as claimed in **Claim 4** wherein the step of applying
2 said conformal layer of material includes applying a plurality of layers of conformal ma-
3 terial on the structure having a severe non-flat topology including over the area of the
4 formed one or more severe non-flat topologies.

1 6. (original)The process as claimed in **Claim 5** wherein one or more of said plurality of
2 layers of conformal material is polysilicon.

1 7. (original)The process as claimed in **Claim 6** wherein one of said plurality of layers of
2 conformal material is an insulative material.

1 8. (original)The process as claimed in **Claim 5** wherein said one or more of plurality of
2 layers are applied in a blanket deposition.

1 9. (previously presented)The process as claimed in **Claim 4** further comprising the step
2 of applying a layer of photoresist material over said conformal layer.

1 10. (currently amended) A structure having a surface for receiving a photoresist film suit-
2 able for exposure by photolithographic equipment, the structure comprising: regions of
3 concern in one or more severe non-flat topologies, wherein each of said one or more se-
4 vere non-flat topologies is formed in accordance with layout dimensions that are accept-
5 able for photolithographic processing as determined as a function of operational charac-
6 teristics of the photolithographic equipment, photoresist thickness, and conformal depo-
7 sitions, and a filler to substantially fill in said regions of concern. ~~one or more severe non-~~
8 ~~flat topologies.~~

1 11. (original) The structure as claimed in **Claim 10** wherein the determination of said lay-
2 out dimensions is made based upon comparing the depth-of-focus of the particular pho-
3 tolithographic equipment and the thickness of a photoresist film applied to the surface of
4 the structure against the severity of the non-flat topologies.

1 12. (original) The structure as claimed in **Claim 10** wherein said one or more severe non-
2 flat topologies are etched topologies.

1 13. (original) The structure as claimed in **Claim 10** wherein the structure is a semicon-
2 ductor structure and said filler is formed of a conformal layer of material on the semicon-
3 ductor structure including over the area of the one or more severe non-flat topologies.

1 14. (original) The structure as claimed in **Claim 13** wherein said conformal layer includes
2 a plurality of layers of conformal material.

1 15. (original) The structure as claimed in **Claim 14** wherein one or more of said plurality
2 of layers of conformal material is polysilicon.

1 16. (original) The structure as claimed in **Claim 15** wherein one of said plurality of layers
2 of conformal material is an insulative material or a conductive material.

1 17. (original)The structure as claimed in **Claim 14** wherein one or more of said plurality
2 of layers is applied in a blanket deposition.

1 18. (currently amended)A micro-electro mechanical system including a structure having a
2 surface for receiving a photoresist film suitable for exposure by photolithographic
3 equipment, the micro-electro mechanical system comprising: one or more severe non-flat
4 topologies defining regions of concern, wherein each of said one or more severe non-flat
5 topologies is formed with layout dimensions changed, if necessary, as determined as a
6 function of operational characteristics of the photolithographic equipment, photoresist
7 thickness, and conformal depositions, and a filler to substantially fill in said regions of
8 concern.~~one or more severe non-flat topologies~~.

1 19. (original)The device as claimed in **Claim 18** wherein said structure forms a portion of
2 a mirror system.

1 20. (original)The device as claimed in **Claim 18** wherein said structure forms a portion of
2 a pump system.

1 21. (original)The device as claimed in **Claim 18** wherein said structure forms a portion of
2 a pressure sensor system.

1 22. (original)The device as claimed in **Claim 18** wherein said structure forms a portion of
2 a chemical sensor system.

1 23. (original)The device as claimed in **Claim 18** wherein said structure forms a portion of
2 an accelerometer system.

- 1 24. (previously presented)The device as claimed in **Claim 18** wherein said structure
- 2 forms a portion of a micro sized medical implement .